



## **Volatile oil composition from *Porophyllum ruderale* (Jacq.) Cass. subs. *runderale* in different phenological stages**

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*Porophyllum ruderale* (Jacq.) Cass. subs *runderale* , known as “couve-cravinho” or “arnica paulistana” is a ruderal aromatic and medicinal herb used in folk medicine as wound healing, antimicrobial, anti-inflammatory and analgesic. The plants were cultivated in two biogeographically different regions, Brazilian Cerrado (Mogi-Guaçu, SP) and Atlantic Rain Forest (Instituto de Botânica-IBt, São Paulo, SP). Plant material (aerial parts) was harvested at three different phenological stages (i.e. vegetative, flowering, and fruiting), and their volatile oils were analyzed by CG/MS. In all phenological stages, the main components were cis- $\beta$ -ocimene, limonene and  $\beta$ -pinene. In the Mogi-Guaçu plants, there was an increase in the concentration of cis- $\beta$ -ocimene and a decrease in the concentration of limonene during the fruiting stage whereas the inverse was observed in IBt ones. The concentration of the hydrocarbon 1-undecene decreased when the plants were fertile. The presence of myrcene was observed in flowering (Mogi-Guaçu) and fruiting (IBt) at low concentration. There was almost no variation in the relative amounts of all main components with the phenological stages and, the highest yield was obtained for the plants from Mogi-Guaçu during the fruiting stages.

**Palavras-Chave:** arnica, Atlantic Rain Forest, Brazilian Cerrado, essential oil, phenological stages

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